

REMARKS

The foregoing amendment is submitted to correct the dependency of claim 7 and to correct an obvious typographical error appearing in claim 23. No new matter has been added to the claims and entry of the amendment is therefore deemed proper and is respectfully requested.

The present claims are directed to a slurry and a product containing the same in which the slurry comprises from about 50% by weight to about 80% by weight of substantially spherical alkali metal bicarbonate particles dispersed in a liquid media. The claims require that the bicarbonate particles have a median particle size of from about 0.2 to about 50 μm and a surface area of from about 120 to about 140 cm^3/g . The slurry is required to have a loose bulk density of between about 1.4 and 1.6 grams/mL and a Zeta potential of about 2 to about 11 mV. The slurry is stable and is prepared in the absence of a suspending aid.

All of the claims pending in the application (claims 3-16 and 23-25) stand rejected as obvious over the combination of Vanzo (U.S. Patent No. 5,075,432), Coulter (U.S. Patent No. 3,743,613) and Masters (U.S. Patent No. 5,855,871).

Vanzo is stated to disclose a slurry of cyclodextrin which also contains sodium bicarbonate. The Office Action acknowledges that the Vanzo reference does not teach any of the characteristics of the bicarbonate particles or the slurry as required in the pending claims. Coulter is stated to disclose the use of sodium bicarbonate as

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a buffering agent which is alleged to slow down the rate of degradation of the slurry material.

Masters is stated to disclose a dentifrice composition in the form of a slurry containing sodium bicarbonate in which surface active agents are incorporated into the composition to aid in the thorough dispersion of the dentifrice throughout the oral cavity.

The Office Action concludes that one of ordinary skill in the art would have been led to the claimed slurry and products containing the same based on the cited references. The rejection is hereby traversed and reconsideration is respectfully requested.

Vanzo discloses polymers of cyclodextrin and methods of forming the same. In forming the polymers of cyclodextrin, the object is to form an emulsion of droplets of polar solvent having a cyclodextrin therein surrounded at least in part by an emulsifying agent in a non-polar solvent and then adding a cross-linking agent which reacts with the cyclodextrin to form a spherical bead of cyclodextrin. In order to form the desired product, it is preferred to mix the cyclodextrin with a polar solvent (column 2, lines 13-29). Suitable polar solvents include water and aqueous alkali metal hydroxide solutions (column 2, lines 56-58). If water is used as a polar solvent, a base must be added to the droplet. Suitable bases include sodium bicarbonate (column 2, lines 65-68). The amount of base will vary depending on the amount of cyclodextrin present with sodium hydroxide being exemplified in an

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amount of 12% to 20% by weight in the solution (column 3, lines 21-25). Sodium hydroxide is the only base mentioned in the examples.

Applicants agree that the Vanzo reference does not teach the claimed features of the bicarbonate particles or the slurry as set forth in depending claims. In addition, there is no teaching or suggestion of the use of 50 to about 80% by weight of bicarbonate particles in the slurry. Indeed, sodium bicarbonate appears to be in the form of a solution as described from column 2, lines 65 to column 3, line 24. Thus, the reference does not teach a slurry in which sodium bicarbonate particles are dispersed within a liquid media. The sodium bicarbonate particles are dissolved because sodium bicarbonate acts as a base in the reference system and would appear to be present in an amount of only 12% to 20% by weight of the solution (column 3, lines 21-25). It is therefore submitted that Vanzo is relevant to the claimed invention only by its disclosure of sodium bicarbonate. None of the material features of claim 3 are taught or suggested in this reference.

Coulter discloses a composition suitable for sealing permeable formations which includes a hydrophobic galactomannan gum, a readily water-soluble organic polymeric suspending agent and a pH control agent. The pH control or buffering agent is described beginning at column 6, line 23 and includes sodium bicarbonate. However, the buffering agent is in the form of a buffered solution. Thus, the sodium bicarbonate is not in the form of particles which are dispersed in a liquid media. In addition, the reference composition requires the presence of a suspending agent. Claim 3 of the present invention provides a slurry which is stable in the absence of a

suspending agent. In addition, the amount of the pH control agent may be varied between about .6% and about 40% by weight of the treated gum and therefore does not provide an amount of sodium bicarbonate within the claims of the present invention.

Masters discloses a two component dentifrice composition which includes as a first component an alkali metal bicarbonate and as a second component an acid-containing dentifrice component. The first component containing the alkali metal bicarbonate salt contains no more than 15% by weight of bicarbonate (column 3, lines 5-8). The small amount of sodium bicarbonate is supported in Table 1 in column 7 read in conjunction with Table 2, wherein the amount of sodium bicarbonate in the first component and the amount of bicarbonate in the total composition (10% by weight of the first component) is far below the high levels of bicarbonate particles required in the present claims.

In addition, the size of the sodium bicarbonate particles may vary but are within the range of 0.4 mm to 0.01 mm which in no way suggests the very small particle size of bicarbonate particles employed in the present invention. Furthermore, there is no teaching or suggestion in the reference of the surface area, bulk density and zeta potential requirements that are set forth in the present claims.

The claims of the present application require of both the bicarbonate particles and the slurry containing the same to have specific characteristics. Those characteristics are clearly set forth in the claims. None of the references alone or in combination teach or suggest these critical features of the invention.

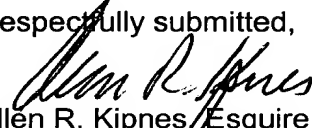
There is no way that one of ordinary skill in the art could combine these references to arrive at the claimed invention. None of the references as indicated above, teach the critical limitations of the claimed slurry and products made thereby. One of ordinary skill in the art would not have been motivated to prepare compositions with these claim limitations because there was no teaching or suggestion that these limitations were critical or that they would produce a stable composition. It is mere speculation to suggest that somehow the references, because they disclose a variety of uses of sodium bicarbonate, could be used to produce a slurry with the particular parameters that are required by the pending claims.

In view of the foregoing, Applicants submit that the present application is in condition for allowance and early passage to issue is therefore deemed proper and is respectfully requested.

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It is believed that no fee is due in connection with this matter. However, if any fee is due, it should be charged to Deposit Account No. 23-0510.

Respectfully submitted,



Allen R. Kipnes, Esquire
Registration No. 28,433
Attorney for Applicant

Address All Correspondence to:

Allen R. Kipnes, Esquire
WATOV & KIPNES, P.C.
P.O. Box 247
Princeton Junction, NJ 08550
(609) 243-0330



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Stephen B Shear
Church & Dwight Co Inc
469 North Harrison Street
Princeton, NJ 08543-5297

EXAMINER

BERKO, RETFORD O

ART UNIT	PAPER NUMBER
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1618

DATE MAILED: 09/30/2005

Response due by 10/30/05

Please find below and/or attached an Office communication concerning this application or proceeding.

Title: Micron-Sized Bicarbonate Particles & Slurries
Containing the Same

**Notice of Non-Compliant
Amendment (37 CFR 1.121)**

Application No.

09/814401

Applicant(s)

Examiner

Berko

Art Unit

1618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

The amendment document filed on 9-19-05 is considered non-compliant because it has failed to meet the requirements of 37 CFR 1.121 or 1.4. In order for the amendment document to be compliant, correction of the following item(s) is required.

THE FOLLOWING MARKED (X) ITEM(S) CAUSE THE AMENDMENT DOCUMENT TO BE NON-COMPLIANT:

- ☐ 1. Amendments to the specification:
- ☐ A. Amended paragraph(s) do not include markings.
 - ☐ B. New paragraph(s) should not be underlined.
 - ☐ C. Other _____
- ☐ 2. Abstract:
- ☐ A. Not presented on a separate sheet. 37 CFR 1.72.
 - ☐ B. Other _____
- ☐ 3. Amendments to the drawings:
- ☐ A. The drawings are not properly identified in the top margin as "Replacement Sheet," "New Sheet," or "Annotated Sheet" as required by 37 CFR 1.121(d).
 - ☐ B. The practice of submitting proposed drawing correction has been eliminated. Replacement drawings showing amended figures, without markings, in compliance with 37 CFR 1.84 are required.
 - ☐ C. Other _____
- ☒ 4. Amendments to the claims:
- ☐ A. A complete listing of all of the claims is not present.
 - ☒ B. The listing of claims does not include the text of all pending claims (including withdrawn claims)
 - ☐ C. Each claim has not been provided with the proper status identifier, and as such, the individual status of each claim cannot be identified. Note: the status of every claim must be indicated after its claim number by using one of the following status identifiers: (Original), (Currently amended), (Canceled), (Previously presented), (New), (Not entered), (Withdrawn) and (Withdrawn-currently amended).
 - ☐ D. The claims of this amendment paper have not been presented in ascending numerical order.
 - ☐ E. Other: _____
- ☐ 5. The amendment is unsigned or not signed in accordance with 37 CFR 1.4.

For further explanation of the amendment format required by 37 CFR 1.121, see MPEP § 714 and the USPTO website at <http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/officeflyer.pdf>.

TIME PERIODS FOR FILING A REPLY TO THIS NOTICE:

1. Applicant is given **no new time period** if the non-compliant amendment is an after-final amendment or an amendment filed after allowance. If applicant wishes to resubmit the non-compliant after-final amendment with corrections, the **entire corrected amendment** must be resubmitted within the time period set forth in the final Office action.
2. Applicant is given **one month**, or thirty (30) days, whichever is longer, from the mail date of this notice to supply the **corrected section** of the non-compliant amendment in compliance with 37 CFR 1.121 or 1.4, if the non-compliant amendment is one of the following: a preliminary amendment, a non-final amendment (including a submission for a request for continued examination (RCE) under 37 CFR 1.114), a supplemental amendment filed within a suspension period under 37 CFR 1.103(a) or (c), and an amendment filed in response to a *Quayle* action.

Extensions of time are available under 37 CFR 1.136(a) only if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action.

Failure to timely respond to this notice will result in:

Abandonment of the application if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action; or

Non-entry of the amendment if the non-compliant amendment is a preliminary amendment or supplemental amendment.

Henrietta Dendy

Legal Instruments Examiner (LIE)

571-272-0517

Telephone No.